

### **REMARKS/ARGUMENTS**

Claims 1 and 3-15 are pending in this application. Claims 1 and 12 have been amended for reasons discussed below. Claim 1 now clearly defines the infrared exposure wavelength at from about 700 to about 1400 nm as defined on page 13 (lines 25-26) of the present application. Amended Claim 12 now clearly indicates that an electronic signal is the source of the imaging exposure as described on page 52 (lines 23-25) of the present application. That electronic signal can be obtained by any suitable means from an image in one of the recited media.

New Claim 13 further limits the photothermographic material of Claim 1 by defining a preferred  $D_{min}$  value of 0.2 as described on page 61 (line 26) of the present application. New Claim 14 further limits the method of Claim 9 with preferred temperature and time conditions as described on page 53 (lines 24-26) of the present application. New Claim 15 further limits the material of Claims 1 and 13.

Thus, all of the amendments and new claims are fully supported by the disclosure of this patent application.

### **Rejection Under 35 U.S.C. §112(2)**

Claims 1 and 4-12 have been rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter that Applicants regard as their invention.

With respect to Claim 1, the Office Action alleges that the absence of providing a value for  $D_{min}$  renders  $b^*$  indefinite. Applicants respectfully disagree. They are setting out a “test” in Claim 1 to enable a skilled artisan to determine if he or she is within the boundaries of the claimed invention with respect to image tone. Since image tone could be very subjective in appearance, an objective test is necessary. The test in Claim 1 is clear and definite. The way it is carried out would be readily apparent to a skilled artisan. Moreover, the term “ $D_{min}$ ” is also well known to a skilled artisan and  $b^*$  can be readily determined at that optical density. Once  $D_{min}$  is ascertained for a given imaged photothermographic material, using the enabling teaching in the present application (including the examples), certain  $b^*$  values at an optical density of 1.0 can also be

determined and it is a simple matter for the two  $b^*$  values to be compared. Contrary to the assertion in the Office Action,  $b^*$  is a well known factor in the well known CEILAB color system. One only has to look it up on the internet to see how well understood it is in the imaging art (a recent Google™ search for “CIELAB” turned up at least 313,000 hits).

The Office Action has also alleged that Claim 1 is unclear and indefinite concerning the “exposure wavelength”. While Applicants disagree with this assessment, in order to expedite prosecution, they have amended Claim 1 to indicate that an infrared exposure wavelength of from about 700 to about 1400 nm is used depending upon the spectral sensitivity of the photothermographic material.

Claim 12 has been rejected as being in improper dependent form and not further limiting a previous claim. The Office Action alleges that the claim would include imaging by X-radiation as well as the infrared irradiation called for in Claim 1. Applicants have amended Claim 12 to indicate that infrared exposure is used in response to an electronic signal obtained by computed radiographic means, digital radiographic means, or from digitally scanning a radiographic image in a wet-processed radiographic film. This should make it clear that Claim 12 further limits the method of Claim 9 whereby the electronic signals to which the photothermographic material responds are obtained from certain image records.

In view of the amendments and arguments, the Section 112(2) is overcome and should be withdrawn.

### **Rejections Under 35 U.S.C. §102**

I. In paragraph 7 of the Office Action, Claims 1 and 4-11 have been rejected as anticipated by WO 96/15479 (Geisler et al.).

The Office Action alleges that Geisler et al. describes the recited features of the claimed photothermographic material and that the composition of Applicants’ claimed material is “similar to” that in Geisler et al. and would therefore both would have the “similar characteristic after processing”. The Office Action particularly points to Example 4 of Geisler et al. as describing Applicants’ material since Example 4 contains an infrared sensitizing dye and acutance dye and would allegedly have the desired optical density greater than 0.1

at  $\lambda_{\text{max}}$ . Thus, Geisler et al. is believed to inherently describe the presently claimed photothermographic material and method of use.

Applicants respectfully disagree and traverse this anticipation rejection for the following reasons.

Applicants would submit that Geisler et al. does not describe the presently claimed invention because the photothermographic material described therein, and particularly those described in Example 4, do not meet the color tone requirements of the presently claimed invention, once the materials are imaged and processed. Rather, the photothermographic material of Example 4 of Geisler et al. is more like the Comparative photothermographic materials described in the present application than like Applicants' claimed photothermographic materials.

As evidence of this fact, the Examiner's attention is directed to the calculations and statements presented by Applicant Bryan Hunt in the enclosed **Rule 132 Declaration**. To avoid tedious repetition, all of his statements are only summarized here, but the details of his statements should be carefully considered in view of the teaching in Geisler et al.

Mr. Hunt, who is clearly skilled in the art of photothermography and knowledgeable about Geisler et al., carefully explains that the Comparative Examples in the present application lacks three or more of the formulation components that are present in the Invention formulations (and materials). See pages 2 and 3 of the Declaration.

Moreover, he also carefully points out that Example 4 of Geisler et al. lacks five of the formulation components that are present in the Invention formulations (and materials). See page 3 of the Declaration. The differences are also summarized in TABLE I on page 5 of the Declaration.

Because the photothermographic material of Example 4 in Geisler et al. is more like the Comparative materials, it would be imaged and developed to exhibit the color tone properties like them. As pointed out in Applicants' application, the Comparative photothermographic materials do not exhibit the color tone properties that Applicants require in the claimed invention. This is evidence that the teaching in Geisler et al, and particularly in the cited Example 4, does not inherently describe the presently claimed invention. Mr. Hunt's analysis of Geisler et al. and the Comparative example is just as probative as actual working examples because his experience and understanding of the art is

extensive enough to provide him with the ability to know what properties the material of Example 4 would have compared to those materials (both Inventive and Comparative) that he and the other inventors actually reduced to practice.

This evidence, provided by Mr. Hunt in his Declaration, clearly rebuts the argument that Geisler et al. inherently describes the presently claimed invention.

### **Rejections Under 35 U.S.C. §103**

II. In paragraph 7 of the Office Action, Claims 1 and 4-11 also have been rejected as being unpatentable over Geisler et al. This rejection is respectfully traversed for similar reasons provided above in rebuttal to the rejection of the same claims under Section 102.

In fact, the unpatentability rejection is even less cogent because not only does the teaching of Geisler et al. not inherently describe Applicants' claimed invention, it provides no hint or motivation as to putting the required features together to achieve the required color tone after imaging and development. Geisler et al. (and particularly Example 4) fails to appreciate the problem addressed by Applicants' claimed invention as well as their means for solving the problem, i.e. adjusting image tone independently of tint to provide images that appear clearer and provide better diagnostic quality. This is not expected from the teaching in Geisler et al. particularly since, as Mr. Hunt capably points out in his Declaration, the materials of Geisler et al. are more like the photothermographic materials outside of the presently claimed invention. It is merely speculation, based on no evidence or technical facts, that Geisler et al. renders the claimed invention *prima facie* obvious to a worker of ordinary skill in the art. Mr. Hunt is certainly at least of ordinary skill and he has shown why the speculation in the Office Action is untrue.

Therefore, the unpatentability rejection should be withdrawn as lacking merit.

III. In paragraph 8, Claim 12 has been rejected as unpatentable over Geisler et al. combined with U.S. Patent 5,172,419 (Manian et al.).

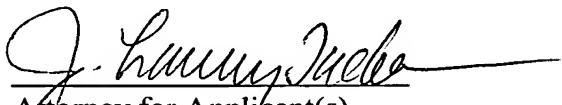
Applicants are not relying upon the subject matter of dependent Claim 12 for patentability. This claim is dependent upon method Claim 9 that

uses the patentable material of Claim 1. By virtue of the patentability of Claim 1, the dependent claims are likewise patentable and the rejection of Claim 12 should be withdrawn.

Even if they were relying on the subject matter of Claim 12 for patentability, the combined teaching of Manian et al. with Geisler et al. fails to render the combined subject matter of Claims 1, 9, and 12 unpatentable for the same reasons that Claim 1 is patentable over Geisler et al. alone. Manian et al. adds nothing to Geisler et al. to supply the teaching that is missing, i.e. a teaching of photothermographic materials that have the required image tone properties. Manian et al. is silent on that point. In fact, it has nothing to do with photothermographic materials and would not likely be combined with Geisler et al. for any reason. Only from a perspective of hindsight would Manian et al. be considered for any reason in the prosecution of the present application. Therefore, the rejection of Claim 12 should be withdrawn.

In view of the foregoing amendments and remarks, reconsideration of this patent application is respectfully requested. A prompt and favorable action by the examiner is earnestly solicited.

Respectfully submitted,

  
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